

WHAT IS CLAIMED IS:

1. An inside-vehicle information communication method, comprising the steps of:

causing a server, provided in a vehicle, to output a request for vehicle using right information, possessed by a user, to an electric device possessed by the user, upon receipt of a request for connection outputted by the electric device;

causing the server to receive the vehicle using right information, outputted from the electric device upon receipt of the request for the vehicle using right information; and

causing the server to confirm whether the electric device has the using right of the vehicle or not, in accordance with the vehicle using right information, and to allow an electric device having the using right to be connected to the server.

2. An inside-vehicle information communication method, comprising the steps of:

causing a server, provided in a vehicle, to output requests for vehicle using right information, possessed by users, to electric devices possessed by the users, upon receipt of requests for connection outputted by the

electric devices;

causing the server to receive the vehicle using right information, outputted from the electric devices upon receipt of the requests for the vehicle using right information;

causing the server to confirm whether the electric devices have the using right of the vehicle or not, in accordance with the vehicle using right information, and to allow electric devices having the using right to be connected to the server;

causing the server, provided in the vehicle, to output requests for private information, used to specify the electric devices, to the electric devices allowed to be connected to the server;

causing the server to receive the private information outputted from the electric devices upon receipt of the requests for the private information; and

causing the server to specify the electric devices in accordance with the private information.

3. The method set forth in claim 2, further comprising a step of causing the server, provided in the vehicle, to specify individual information, which is to be given to each of said electric devices allowed to be connected to the server, in accordance with the vehicle using right

information that have been inputted and transportation information concerning a transportation of the vehicle that is stored in the server.

4. The method set forth in claim 3, further comprising a step of causing the server, provided in the vehicle, to transmit the individual information, that has been specified, to a corresponding electric device, in accordance with the private information.

5. The method set forth in claim 3, further comprising the steps of:

causing the server, provided in the vehicle, to specify a time and/or geographical range, in which the server can be used, with respect to each of the electric devices allowed to be connected to the server, in accordance with the vehicle using right information that have been inputted and the transportation information concerning the transportation of the vehicle that is stored in the server; and

performing a specific process with respect to the electric device, when the electric device is to be away from the time and/or geographical range in which the server can be used.

6. The method set forth in claim 5, wherein said specific process is a process for transmitting information, which indicates that the time and/or geographical range in which the server can be used is over, to the electric device.

7. The method set forth in claim 3, further comprising the steps of:

causing the server, provided in the vehicle, to specify a time and/or geographical range in which the user can use the vehicle, in accordance with the vehicle using right information that has been inputted; and

causing the server to inform the electric device that the time and/or geographical range is over, when the electric device is to be away from the time and/or geographical range in which the vehicle can be used.

8. The method set forth in claim 2, further comprising a step of causing the server, provided in the vehicle, to perform an electric settlement via the electric device possessed by each user.

9. The method set forth in claim 3, further comprising the steps of:

causing the server, provided in the vehicle, to

store information concerning a present time and/or a present position;

causing the server to calculate a deviation which occurs in a transport time and/or a transport position of the vehicle, in accordance with the transportation information concerning the transportation of the vehicle that is stored in the server and the present time and/or the present position that have been inputted; and

causing the server to rectify the transportation information in accordance with the deviation which occurred in the transport time.

10. An inside-vehicle information communication apparatus which is provided in a vehicle so as to transmit and receive information to and from an electric device possessed by a user of the vehicle, comprising:

communication means for transmitting and receiving the information to and from the electric device; and

a managing section (a) for outputting a request for vehicle using right information, possessed by a user, to the electric device possessed by the user, upon receipt of a request for connection outputted from the electric device, (b) for receiving the vehicle using right information via the communication means, (c) for confirming whether the electric device has the using

right or not in accordance with the vehicle using right information, and (d) for allowing an electric device having the using right to be connected to the inside-vehicle information communication apparatus.

11. The inside-vehicle information communication apparatus set forth in claim 10, wherein:

said managing section outputs requests for private information to specify the electric device that has been allowed to be connected to the inside-vehicle information communication apparatus, with respect to the electric device, and receives identification information outputted from the electric device upon receipt of the request for the private information, and

the electric device is specified in accordance with the identification information.

12. An inside-vehicle information communication system, comprising:

an inside-vehicle information communication apparatus which is provided in a vehicle so as to transmit and receive information to and from an electric device possessed by a user of the vehicle; and

an electric device,

said apparatus including: communication means for

transmitting and receiving the information to and from the electric device; and

a managing section (a) for outputting a request for vehicle using right information, possessed by the user, to the electric device possessed by the user, upon receipt of a request for connection outputted from the electric device, (b) for receiving the vehicle using right information via the communication means, (c) for confirming whether the user has the using right or not in accordance with the vehicle using right information, and (d) for allowing an electric device having the using right to be connected to the inside-vehicle information communication apparatus,

said electric device including:

(a) a radio section for transmitting and receiving information to and from communication means of the inside-vehicle information communication apparatus;

(b) a memory section for saving vehicle using right information and private information; and

(c) a controlling section for controlling the radio section and the memory section.

13 An inside-vehicle information communication system, comprising:

a vehicle for carrying users; and

an inside-vehicle information communication apparatus which is provided in a vehicle so as to transmit and receive information to and from an electric device possessed by a user of the vehicle,

said inside-vehicle information communication apparatus including:

communication means for transmitting and receiving the information to and from the electric device; and

a managing section (a) for outputting a request for vehicle using right information, possessed by the user, to the electric device possessed by the user, upon receipt of a request for connection outputted from the electric device, (b) for receiving the vehicle using right information via the communication means, (c) for confirming whether the user has the using right or not in accordance with the vehicle using right information, and (d) for allowing an electric device having the using right to be connected to the inside-vehicle information communication apparatus.

14 The inside-vehicle information communication system set forth in claim 12, further comprising a vehicle for carrying users.

15 The inside-vehicle information communication system



set forth in claim 12, wherein said electric device is possessed by each user, and is portable.

16 An inside-vehicle information communication program, wherein a server, provided in a vehicle, is made to execute respective steps of an inside-vehicle information communication method, said method comprising the steps of:

causing a server, provided in a vehicle, to output a request for vehicle using right information, possessed by a user, to an electric device possessed by the user, upon receipt of a request for connection outputted by the electric device;

causing the server to receive the vehicle using right information, outputted from the electric device upon receipt of the request for the vehicle using right information; and

causing the server to confirm whether the electric device has the using right or not, in accordance with the vehicle using right information, and to allow an electric device having the using right to be connected to the server.

17 A recording medium, which stores an inside-vehicle information communication program for making a server,

causing a server, provided in a vehicle, to output a request for vehicle using right information, possessed by a user, to an electric device possessed by the user, upon receipt of a request for connection outputted by the electric device;

causing the server to confirm whether the electric device has the using right or not, in accordance with the vehicle using right information, and to allow an electric device having the using right to be connected to the server.

the information communication terminal which has (a)  
reading means for reading a using condition to use the

system from a first information recording medium in which the using condition is recorded, and (b) transmitting means for transmitting the using condition, read by the reading means, to the server; and

the server which has (a) memory means for storing the using condition to use the system, (b) a first checking means for checking the using condition, transmitted from the transmitting means, with the using condition, stored in the memory means, and (c) communication controlling means which enables information communication, performed between the server and the information communication terminal, only in a case where the first checking means judges that the both using conditions are identical to each other.

19. A vehicle-provided communication network system which performs information communication between a server, provided in a vehicle, and an information communication terminal, comprising:

the server which has (a) external communication means for performing the information communication with a information communication apparatus outside the vehicle, and (b) memory means for saving identification information of a portable communication terminal connected to the information communication terminal; and

means for performing a relay with respect to communication performed between the information communication apparatus and the portable communication terminal, or receiving information transmitted from the information communication apparatus, instead of the portable communication terminal, in a case where the external communication means receives the information transmitted from the information communication apparatus to the portable communication terminal, the information being the identification information stored in the memory means.

20. The vehicle-provided communication network system set forth in claim 18, wherein:

said server further includes:

external communication means for performing the information communication with the information communication apparatus outside the vehicle; and

storing means for storing information received via the external communication means from the information communication apparatus, before or after the information communication performed between the server and the information communication terminal begins,

said information communication terminal using the information stored in the storing means after the

information communication performed between the server and the information communication terminal begins.

21. The vehicle-provided communication network system set forth in claim 18, wherein said server further includes:

external communication means for performing the information communication with the information communication apparatus outside the vehicle; and

means for forwarding information, processed by the information communication terminal, via the external communication means to the information communication apparatus outside the vehicle.

22. The vehicle-provided communication network system set forth in claim 20, wherein said server includes assigning information registration means for registering assigning information to assign information, and obtains information assigned by the assigning information via said external communication means from the information communication apparatus outside the vehicle, after the information communication performed between the server and the information communication terminal begins.

23. An information recording medium issuing apparatus which issues a first recording medium storing a using

condition to use a vehicle-provided communication network system in which information communication is performed between a server and a information communication terminal, and sets a first using condition to use the vehicle-provided communication network system and a second using condition to use the vehicle in advance, comprising:

a third reading means for reading a third using condition from a second information recording medium in which the third using condition to use the vehicle is stored; a second reading means for reading the second using condition that has been set; a second checking means for checking the second using condition, read by the second reading means, with the third using condition, read by the third reading means; a first reading means for reading the first using condition that has been set; and first recording means for recording the first using condition in the first recording medium, wherein

said recording means records the first using condition in the first information recording medium, when the second checking means judges that the second using condition is identical to the third using condition.

24. An information recording medium issuing apparatus which issues a third information recording medium

recording a using condition to use a vehicle-provided communication network system in which information communication is performed between a server and a information communication terminal, and a using condition to use a vehicle, and sets a first using condition to use the vehicle-provided communication network system and a second using condition to use the vehicle in advance, comprising:

outputting means for outputting a third using condition to use the vehicle; a second reading means for reading the second using condition that has been set; a second checking means for checking the second using condition read by the second reading means with the third using condition outputted by said outputting means; a first reading means for reading the first using condition that has been set; and a second recording means for recording the first using condition, and the second using condition, in a third information recording medium, wherein

the second recording means records the first using condition and the second using condition in the third information recording medium, when the second checking means judges that the second using condition is identical to the third using condition.

25. The vehicle-provided communication network system set forth in claim 18, wherein said server includes deleting means for deleting information, and the deleting means deletes information, that has been processed by the information communication terminal, after the information communication, performed between the server and the information communication terminal, is finished.

26. The vehicle-provided communication network system set forth in claim 25, wherein said server includes external communication means for performing the information communication with a information communication apparatus outside the vehicle, and the external communication means forwards the information, that has been processed by the information communication terminal, to the information communication apparatus outside the vehicle, before the deleting means deletes the information.

27. The vehicle-provided communication network system set forth in claim 19, further comprising switching means for cutting off a connection between the portable communication terminal and the server so as to reconnect said portable communication terminal to another portable communication terminal, wherein said switching means cuts off the connection between the portable communication



terminal and the server, after the information communication performed between the server and the portable communication terminal is finished, and reconnects said portable communication terminal to another portable communication terminal.

28. The vehicle-provided communication network system set forth in claim 19, further comprising start setting means for setting start time when the relay begins, wherein said server begins to relay communication performed between the information communication apparatus outside the vehicle and the portable communication terminal at the start time setted by said start setting means.

29. The vehicle-provided communication network system set forth in claim 19, further comprising deleting means for deleting the using condition or the identification information stored in the memory means, wherein the first information recording medium further stores information concerning a term of validity in which the first information recording medium can be used, and the deleting means deletes the using condition or the identification information stored in the memory means after the term of validity has passed.

30. The vehicle-provided communication network system set forth in claim 18, further comprising environment setting means for setting a information communication environment, wherein said environment setting means sets a same information communication environment with respect to plural users of the vehicle, or sets the same information communication environment in accordance with the information recorded in the first information recording medium.

31. A vehicle-provided communication network system, comprising a server, said server including:

communication means for performing communication with a information communication terminal;

memory means for storing a using condition to use the system;

a first checking means for checking a using condition, received via the communication means from the information communication terminal, with the using condition stored in the memory means; and

communication controlling means which enables information communication performed between the information communication terminal and the server only in a case where the first checking means judges that the both using conditions are identical to each other.

32. An inside-vehicle information communication method, comprising the steps of:

causing a server, provided in a vehicle, to receive vehicle using right information outputted from an electric device, possessed by a user of the vehicle, which outputs a request for connection to the server; and

causing the server to confirm whether the electric device has using right of the vehicle or not, in accordance with the vehicle using right information, and to allow an electric device having the using right to be connected to the server.

33. An inside-vehicle information communication apparatus which is provided in a vehicle so as to transmit and receive information to and from an electric device possessed by a user of the vehicle, comprising:

communication means for transmitting and receiving the information to and from the electric device; and

a managing section for (a) receiving vehicle using right information, outputted from the electric device which requests the inside-vehicle information communication apparatus to connect to the electric device, via the communication means, and (b) for confirming whether the electric device has the using

right or not in accordance with the vehicle using right information, and (c) for allowing an electric device having the using right to be connected to the inside-vehicle information communication apparatus.